## CLAIMS

1. Compounds of the following general formula (I):


I
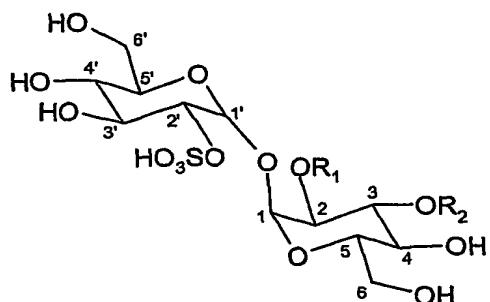
wherein R_1 and R_2 are fatty acyl groups.

2. Compounds according to claim 1, wherein R_1 and R_2 independently from each other represent a fatty acyl group containing from 16 to 60 carbon atoms, and more particularly wherein R_1 and R_2 are selected from the group comprising:
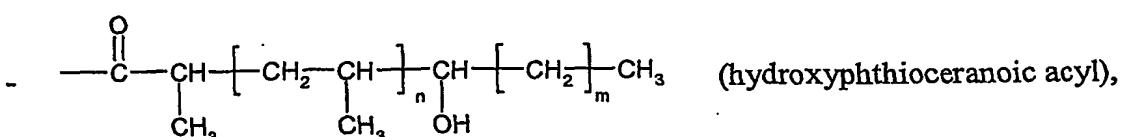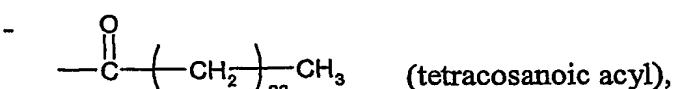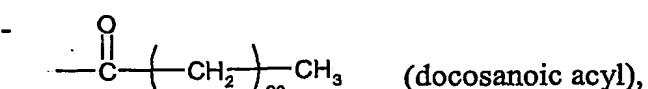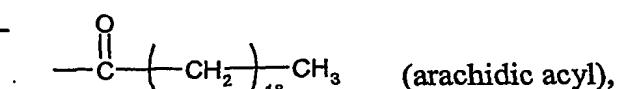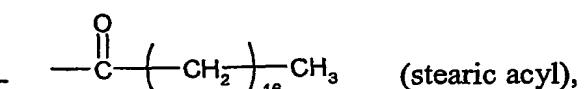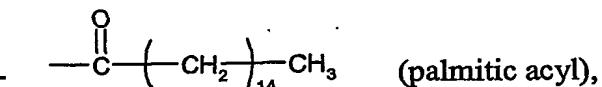
  (palmitic acyl),

  (stearic acyl),

  (arachidic acyl),

  (docosanoic acyl),

  (tetracosanoic acyl),

  (hydroxyphthioceranoic acyl),

wherein m is 14 or 16 and n is an integer from 2 to 10,

$$\underset{\overset{\displaystyle O}{\parallel}}{-C}-\underset{\underset{\displaystyle CH_3}{|}}{CH}-\left[CH_2-\underset{\underset{\displaystyle CH_3}{|}}{CH}\right]_n-CH_2-\left[CH_2\right]_m-CH_3 \qquad \text{(phthioceranoic acyl)},$$
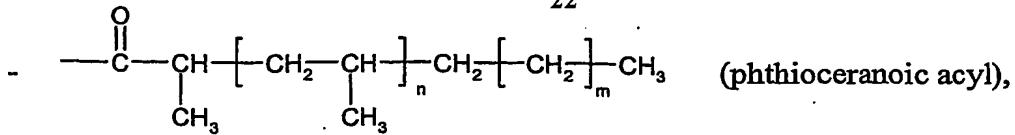
wherein m is 14 or 16 and n is an integer from 2 to 10,

3. Compounds according to claim 2, wherein R_1 and R_2 are selected from the group comprising palmitic acyl and stearic acyl, namely compounds of following formulae:
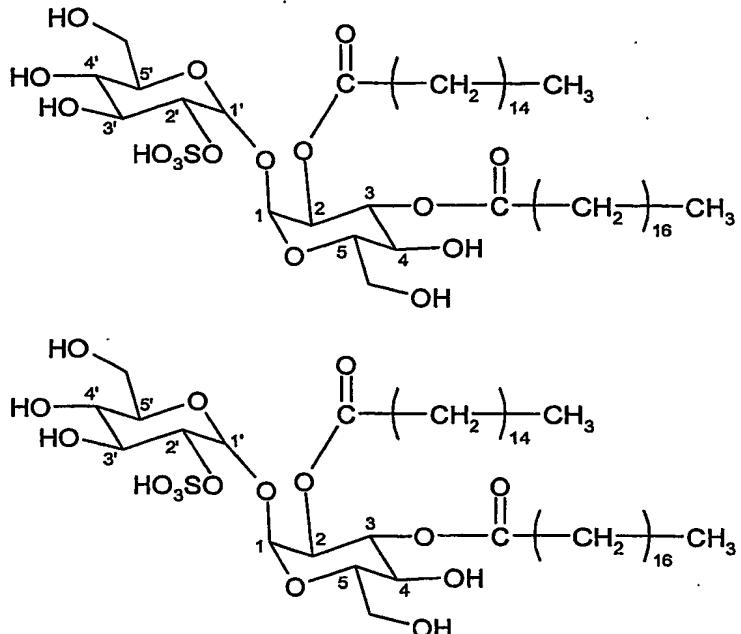


4. Compounds according to claim 2, wherein at least one of R_1 and R_2 represents a hydroxyphthioceranoic acyl group.

5. Compounds according to claim 4, wherein R_1 or R_2 represents a hydroxyphthioceranoic acyl group.

6. Compounds according to claim 5, wherein:

• R_1 represents a hydroxyphthioceranoic acyl group, and R_2 represents a palmitic acyl group or a stearic acyl group, namely compounds of following formula (II):

23

II
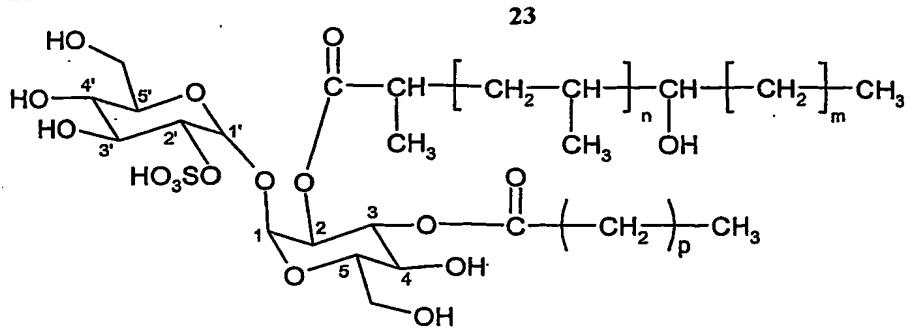
wherein p is 14 or 16, m is 14 or 16 and n is an integer from 2 to 10, or

- R_2 represents a hydroxyphthioceranoic acyl group, and R_1 represents a palmitic acyl group or a stearic acyl group, namely compounds of following formula (III):

III
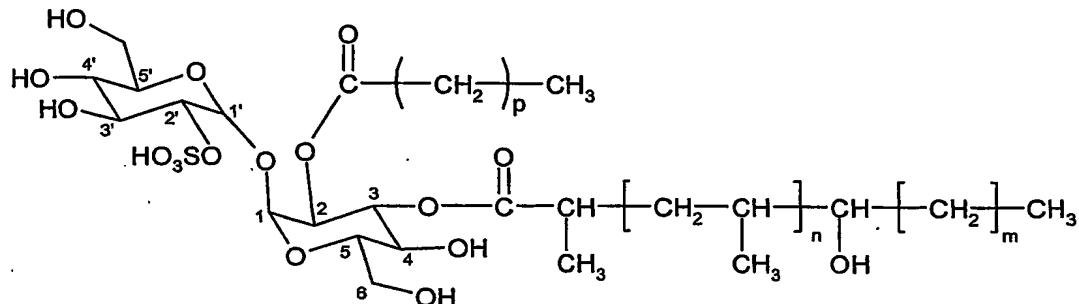
wherein p is 14 or 16, m is 14 or 16 and n is an integer from 2 to 10.

7. Compounds according to claim 6, of formula II, wherein:

- $n = 2$, $m = 14$ and $p = 14$ (II.1) ;
- $n = 2$, $m = 14$ and $p = 16$ (II.2) ;
- $n = 2$, $m = 16$ and $p = 14$ (II.3) ;
- $n = 2$, $m = 16$ and $p = 16$ (II.4) ;

- $n = 3$, $m = 14$ and $p = 14$ (II.5) ;
- $n = 3$, $m = 14$ and $p = 16$ (II.6) ;
- $n = 3$, $m = 16$ and $p = 14$ (II.7) ;
- $n = 3$, $m = 16$ and $p = 16$ (II.8) ;

- $n = 4$, $m = 14$ and $p = 14$ (II.9) ;
- $n = 4$, $m = 14$ and $p = 16$ (II.10) ;

- $n = 4$, $m = 16$ and $p = 14$ (II.11) ;
- $n = 4$, $m = 16$ and $p = 16$ (II.12) ;

- $n = 5$, $m = 14$ and $p = 14$ (II.13) ;
5   - $n = 5$, $m = 14$ and $p = 16$ (II.14) ;
- $n = 5$, $m = 16$ and $p = 14$ (II.15) ;
- $n = 5$, $m = 16$ and $p = 16$ (II.16) ;

- $n = 6$, $m = 14$ and $p = 14$ (II.17) ;
10   - $n = 6$, $m = 14$ and $p = 16$ (II.18) ;
- $n = 6$, $m = 16$ and $p = 14$ (II.19) ;
- $n = 6$, $m = 16$ and $p = 16$ (II.20) ;

- $n = 7$, $m = 14$ and $p = 14$ (II.21) ;
15   - $n = 7$, $m = 14$ and $p = 16$ (II.22) ;
- $n = 7$, $m = 16$ and $p = 14$ (II.23) ;
- $n = 7$, $m = 16$ and $p = 16$ (II.24) ;

- $n = 8$, $m = 14$ and $p = 14$ (II.25) ;
20   - $n = 8$, $m = 14$ and $p = 16$ (II.26) ;
- $n = 8$, $m = 16$ and $p = 14$ (II.27) ;
- $n = 8$, $m = 16$ and $p = 16$ (II.28) ;

- $n = 9$, $m = 14$ and $p = 14$ (II.29) ;
25   - $n = 9$, $m = 14$ and $p = 16$ (II.30) ;
- $n = 9$, $m = 16$ and $p = 14$ (II.31) ;
- $n = 9$, $m = 16$ and $p = 16$ (II.32) ;

- $n = 10$, $m = 14$ and $p = 14$ (II.33) ;
30   - $n = 10$, $m = 14$ and $p = 16$ (II.34) ;
- $n = 10$, $m = 16$ and $p = 14$ (II.35) ;
- $n = 10$, $m = 16$ and $p = 16$ (II.36) ;

or of formula III, wherein:

- $n = 2$, $m = 14$ and $p = 14$ (III.1) ;
- $n = 2$, $m = 14$ and $p = 16$ (III.2) ;
- $n = 2$, $m = 16$ and $p = 14$ (III.3) ;
- $n = 2$, $m = 16$ and $p = 16$ (III.4) ;

5

- $n = 3$, $m = 14$ and $p = 14$ (III.5) ;
- $n = 3$, $m = 14$ and $p = 16$ (III.6) ;
- $n = 3$, $m = 16$ and $p = 14$ (III.7) ;
- $n = 3$, $m = 16$ and $p = 16$ (III.8) ;

10

- $n = 4$, $m = 14$ and $p = 14$ (III.9) ;
- $n = 4$, $m = 14$ and $p = 16$ (III.10) ;
- $n = 4$, $m = 16$ and $p = 14$ (III.11) ;
- $n = 4$, $m = 16$ and $p = 16$ (III.12) ;

15

- $n = 5$, $m = 14$ and $p = 14$ (III.13) ;
- $n = 5$, $m = 14$ and $p = 16$ (III.14) ;
- $n = 5$, $m = 16$ and $p = 14$ (III.15) ;
- $n = 5$, $m = 16$ and $p = 16$ (III.16) ;

20

- $n = 6$, $m = 14$ and $p = 14$ (III.17) ;
- $n = 6$, $m = 14$ and $p = 16$ (III.18) ;
- $n = 6$, $m = 16$ and $p = 14$ (III.19) ;
- $n = 6$, $m = 16$ and $p = 16$ (III.20) ;

25

- $n = 7$, $m = 14$ and $p = 14$ (III.21) ;
- $n = 7$, $m = 14$ and $p = 16$ (III.22) ;
- $n = 7$, $m = 16$ and $p = 14$ (III.23) ;
- $n = 7$, $m = 16$ and $p = 16$ (III.24) ;

30

- $n = 8$, $m = 14$ and $p = 14$ (III.25) ;
- $n = 8$, $m = 14$ and $p = 16$ (III.26) ;
- $n = 8$, $m = 16$ and $p = 14$ (III.27) ;
- $n = 8$, $m = 16$ and $p = 16$ (III.28) ;

- $n = 9$, $m = 14$ and $p = 14$ (III.29) ;
- $n = 9$, $m = 14$ and $p = 16$ (III.30) ;
- $n = 9$, $m = 16$ and $p = 14$ (III.31) ;
- $n = 9$, $m = 16$ and $p = 16$ (III.32) ;

- $n = 10$, $m = 14$ and $p = 14$ (III.33) ;
- $n = 10$, $m = 14$ and $p = 16$ (III.34) ;
- $n = 10$, $m = 16$ and $p = 14$ (III.35) ;
- $n = 10$, $m = 16$ and $p = 16$ (III.36) ;

**8.** Compounds according to claim 7, of following formulae:
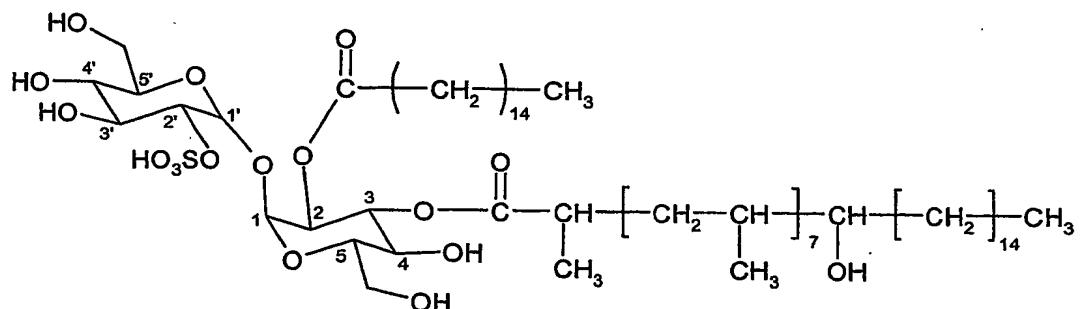
III.21
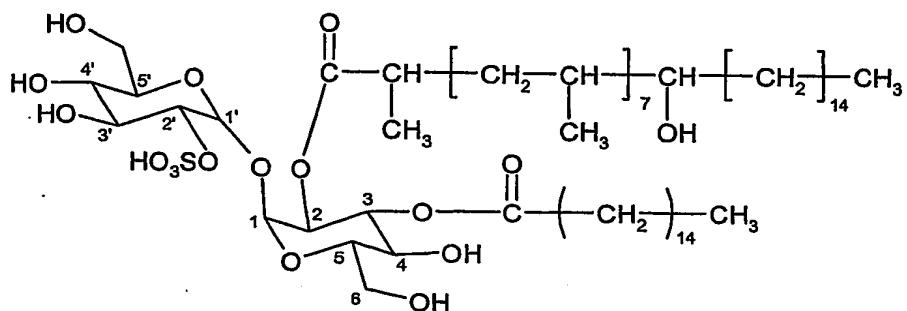

II.21
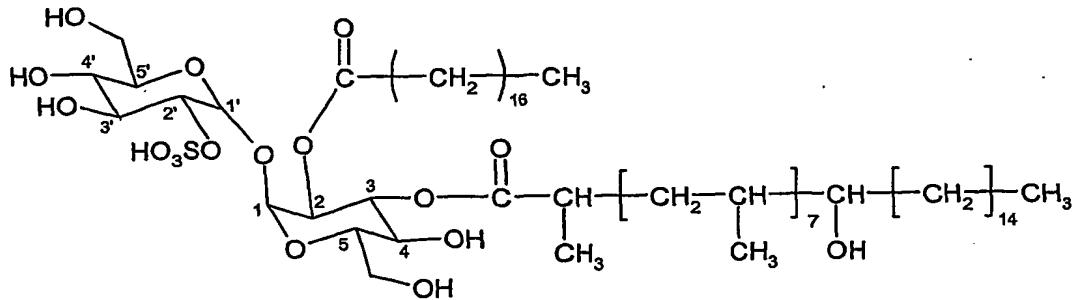
III.22
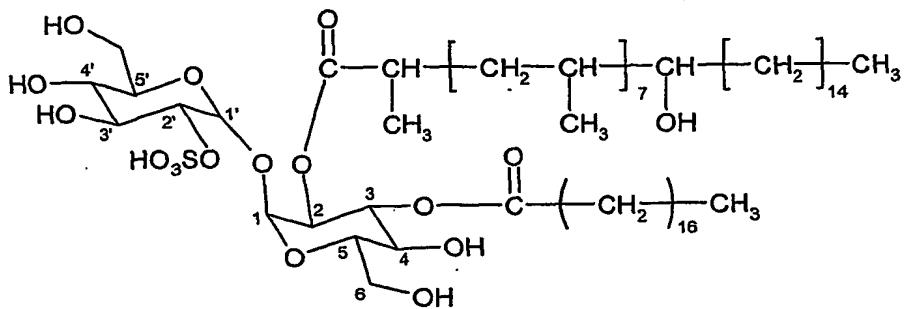
II.22
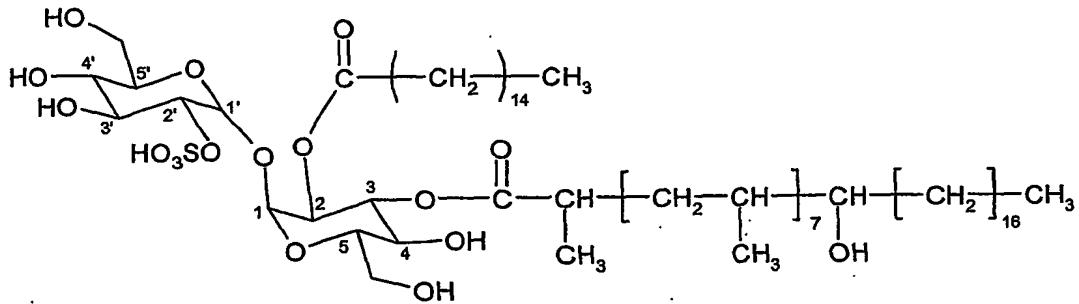
III.23
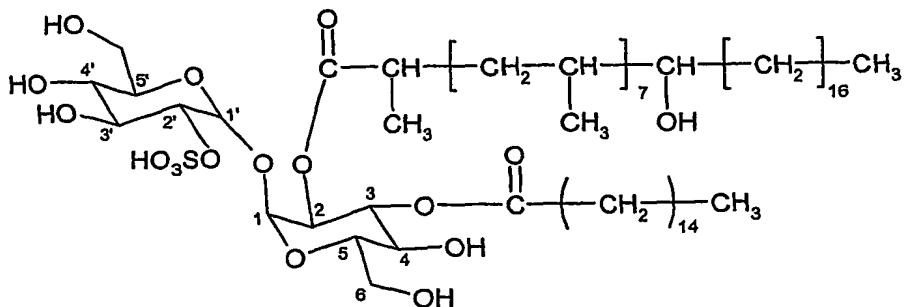
II.23

9. A composition comprising at least two different compounds of formula I such as defined in any of claims 1 to 8.

10. A composition according to claim 9, characterized in that it comprises a mixture of compounds selected from the compounds as defined in any of claims 6 to 8.

11. A composition according to claim 9 or 10, wherein compounds selected from the compounds of claim 8 represent from about 20% to about 100%, more particularly about 30%, of the total amount of compounds of formula I of said composition.

12. A pharmaceutical composition comprising at least one compound according to any of claims 1 to 8, or a composition according to any of claims 9 to 11, in association with a pharmaceutically acceptable vehicle.

13. A pharmaceutical composition according to claim 12, characterized in that it is presented in a form intended for administration by oral or injectable route.

14. A pharmaceutical composition according to claim 12 or 13, characterized in that it comprises one or more other products useful for the treatment or the prophylaxis of tuberculosis, such as BCG or mycobacterial proteins.

15. Products comprising:
   - at least one compound according to any of claims 1 to 8,
   - and at least one other product useful for the treatment or the prophylaxis of tuberculosis, such as BCG or mycobacterial proteins,
as a combined preparation for simultaneous, separate or sequential use in the treatment or the prophylaxis of tuberculosis.

16. Use of at least one compound according to any one of claims 1 to 8, or of a composition according to any of claims 9 to 11, for the preparation of a medicament, notably a vaccine, intended for the treatment or the prophylaxis of tuberculosis.

17. Use of at least one compound according to any one of claims 1 to 8, or of a composition according to any of claims 9 to 11, as an immune reaction activator, and more particularly an inflammatory reaction activator.

5   18. Use of at least one compound according to any one of claims 1 to 8, or of a composition according to any of claims 9 to 11, to induce the activation of T lymphocytes.

19. Use of at least one compound according to any one of claims 1 to 8, or of a
10   composition according to any of claims 9 to 11, to induce the production of IFN-γ, TNF-α, IL-4 or granulysin.

20. A process for generating T cell clones, characterized in that it comprises the following stages:
15   - incubating antigen presenting cells (APCs), notably dendritic cells, with a *Mycobacterium tuberculosis* envelope preparation substantially devoid of proteins, to obtain non-protein envelope antigen loaded APCs,
           - contacting peripheral blood mononuclear cells with the envelope antigen loaded APCs to obtain proliferating T cells,
20   - cloning proliferating T cells by limiting dilution and selecting the clones releasing a molecule selected from the group comprising IFN-γ, TNF-α, granulysin or IL-4 when contacted by envelope antigen loaded APCs to obtain T cell clones.

25   21. T cell clones such as obtained by the process according to claim 20.

22. A process for screening products, such as sulfoglycolipids extracted from *Mycobacterium tuberculosis*, characterised in that it comprises the following stages:
           - contacting dendritic cells loaded with the product to screen, notably
30   sulfoglycolipids extracted from *Mycobacterium tuberculosis*, with T cell clones according to claim 21,
           - detecting a molecule selected from the group comprising IFN-γ, TNF-α, granulysin or IL-4, released by the T cell clones.

23. A process for the extraction of compounds according to any of claims 1 to 8, or of a composition according to any of claims 9 to 11, from *Mycobacterium tuberculosis*, characterized in that it comprises the following stages:

- treatment of *M. tuberculosis* bacteria with a mixture of methanol and chloroform to obtain a chloroform/methanol extract,

- concentration of the chloroform/methanol extract followed by its partition between a chloroform phase and an aqueous phase,

- taking of the chloroform phase and evaporation of most of the chloroform, followed by addition of acetone thereto to obtain a precipitate and a soluble acetone phase,

- taking of the soluble acetone phase followed by its concentration, and application of the concentrated soluble acetone phase on a silicic acid column irrigated with mixtures of methanol and chloroform,

- elution of a fraction from the above-mentioned silicic acid column by a mixture of chloroform and approximately 20% methanol, said fraction corresponding to a composition according to any of claims 9 to 11,

- if necessary purification of the fraction eluted from the silicic acid column to obtain different preparations respectively containing substantially only one compound according to any of claims 1 to 8.